Burn Area Recovery Task Force (BARTF) Report
San Diego County
Poomacha Fire

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Executive Summary

The Poomacha Fire burned over 49,000 acres in the northern part of San Diego County. There are over 800 structures at high risk due to debris flows with over 350 of these outside the burn area. This report identifies significant issues that were gathered from state and federal Burned Area Emergency Response (BAER) reports, flood hazard maps, and meetings with various local, state and federal officials. They are as follows:

- The denuded slopes within the burn area present a direct threat to several communities and associated infrastructure from mudflows, flooding and debris flows.
- The greatest risk to lives is within the San Luis Rey River/Paradise Creek Watershed (188 Buildings), the San Luis Rey River/Pauma Creek Watershed (461 Buildings), and the San Luis Rey River/Gomez Creek Watershed (167 Buildings);
- A majority of the buildings and associated infrastructure identified as at risk are located within various Native American tribal lands under Bureau of Indian Affairs (BIA) jurisdiction;
- Removal of debris, cleaning culverts, and erosion control measures may reduce the risk to public and private property;
- Funding for debris removal and erosion control measures may fall under the purview of the NRCS;
- Several listed species are located within the risk areas. These species may require consultation with the Department of Fish and Game (DFG) and US Fish and Wildlife Service (USFWS); and
- Environmental permits may be required for many of the proposed projects identified in subsequent reports. Many of these proposed projects can be completed under emergency conditions or under the waiver process identified in State Executive Order (S-13-07).

Purpose

This BARTF report presents a brief description and assessment of the Poomacha Fire, one of numerous Southern California wildfires included in the Presidential Disaster Declaration FEMA-1731-DR. This report is intended to facilitate the effective use of available resources to address threats to public safety, public and private property, and infrastructure that may arise during the 2007 – 2008 winter rainy season due to denuded slopes, and the affiliated potential for flooding and debris flows.

The information was gathered for this report by state and federal Burned Area Emergency Response (BAER) reports, Post-Fire Hazard Awareness Maps, and meetings with various local, state, and federal officials.

Introduction

The Poomacha Fire encompassed 49,410 acres in the northern parts of San Diego County. A total of 138 homes, 78 outbuildings and one commercial building were destroyed.

There are eight Hydrologic Unit Code (HUC-6) sub-watersheds in the fire burn area. These are the San Luis Rey River/Pauma Creek, San Luis Rey River/Gomez Creek, Temecula Creek/Long Canyon, Temecula Creek/Arroyo Seco, West Fork San Luis Rey River, San Luis Rey River/Paradise Creek, Temescal Creek, and Santa Ysabel Creek/Rockwood Canyon sub-watersheds. Though these are technically sub-watersheds, the term "watershed" is used to describe them.

Names for streams and reservoirs were gathered from the United States Geologic Survey (USGS) topographic maps. Google Earth was used to locate buildings and facilities, and to confirm topographies. The debris flow hazards were calculated and put in Geographic Information System (GIS) map form by FEMA.

Several state and federal listed species are located within the risk areas. Project-related impacts to these species may require consultation with U.S. Fish and Wildlife Service and Department of Fish and Game (DFG). Environmental permits may be required for many of the proposed projects identified in the BARTF Report. Many of these proposed projects can be completed under emergency conditions or under the waiver process identified in State Executive Order (S-13-07). Projects that do not fall under these classifications would need to follow the regular permit process (see Environmental Permitting Requirements Appendix).

There are numerous archeological sites identified within the Poomacha Fire burn area. There are likely more sites exposed now than previously inventoried, as vegetation that formerly hid archeological sites is now burned away. Therefore, potential emergency protective measures should consider the presence of these sites, along with the protected species issues.

There are several Native American tribal lands within the Poomacha Fire burn area. Bureau of Indian Affairs has jurisdiction over 23,980 acres therein, and the sovereign nations within the affected area include the La Jolla, Pala, Pauma-Yuima, Rincon, and the San Pasqual. (See attached Archeological Appendix for more information)

The San Luis Rey River/Pauma and the San Luis Rey River/Paradise Creek watersheds are included in the proposed San Diego County North County Multiple Species Conservation Program plan. This Natural Community Conservation Plan covers state and federal endangered species permitting for several species, including the coastal California gnatcatcher (See attached Biological Appendix for further details on listed species).

The identified risks and related post-fire issues have been identified and listed according to watershed boundaries as follows:

San Luis Rey River/Paradise Creek

Background

- This watershed occupies most of the south end of the fire burn area. It includes most of the Rincon and La Jolla tribal lands.
- The projected debris flows are mostly outside of the ten-year flood plain. This makes them less predictable, and thereby more dangerous.
- The La Jolla tribal lands suffered a debris flow after the December 1-2, 2007 storm. Cleanup efforts were needed at 52 homes.
- Protected species within this watershed may include golden eagle, Coastal california gnatcatcher, arroyo toad, and Nevin's barberry.

Analysis

- At least 188 buildings are at high risk from potential debris flows, including a day care center. This count does not include every outbuilding. These debris flows are projected to proceed from Paradise Creek, San Luis Rey River, or an unnamed creek that contributes to San Luis Rey River at the north end of the watershed.
- Only 18 of these buildings are outside the tribal lands. There are 97 buildings within the Rincon tribal lands, and 73 are within the La Jolla tribal lands.

Potential Emergency Protective Measures

- Potential emergency protective measures should be examined to help reduce the risk of destructive debris flows, including installation of runoff barriers, placement of sandbags, dikes, ditching, jute netting, and fiber wattles. This work could be eligible for funding under FEMA/OES PA Category B. Funding from NRCS could also be used to perform this work. Hydroseeding is not considered an option due to the potential for introduction of invasive species.

San Luis Rey River/Pauma Creek

Background

- This watershed occupies the central part of the Poomacha Fire burn area. It includes Pauma-Yuima, Rincon, and La Jolla tribal lands.
- Debris flows are projected to continue down the San Luis Rey River from the San Luis Rey River/Paradise Creek watershed. Less than half of its projected debris flows lie within the ten year flood plain. This makes them less predictable, and more dangerous.

- Tributary creeks that are projected to contribute debris flow into the San Luis Rey River include Plaisted Creek, Potrero Creek, Yuima Creek, Sycamore Canyon, Harrison Canyon, Jaybird Creek, Pauma Creek, and Frey Creek. Other unnamed creeks or canyons may also contribute to the debris flow.
- Debris flows from this watershed are projected to flow down the San Luis Rey River into the San Luis Rey River/Gomez Creek watershed.
- Protected or sensitive species within this watershed may include the Southwestern willow flycatcher, Large-blotched salamander, Laguna mountain skipper, San Bernardino blue grass (*Poa atropurpurea*), and Dunn's Mariposa lily.

Analysis

- At least 461 buildings are at risk from potential debris flows within this watershed. This figure does not include every outbuilding. There are 35 of these in Pauma-Yuima tribal lands, and 79 of them are in Rincon tribal lands. No La Jolla tribal lands are projected to see debris flows within this watershed.
- Other facilities at risk include a fire station, an airport landing strip, a golf course, and several water tanks.

Potential Emergency Protective Measures

- Potential emergency protective measures should be examined to help reduce the risk of destructive debris flows, including installation of runoff barriers, placement of sandbags, dikes, ditching, jute netting, and fiber wattles. This work could be eligible for funding under FEMA/OES PA Category A and B. Funding from NRCS could be used to accomplish the emergency protective measures. Hydroseeding is not considered an option due to the potential for introduction of invasive species.

San Luis Rey River/Gomez Creek

Background

- Only a relatively small eastern section of this watershed lies within the burn area, but it is projected to receive a large debris flow down the San Luis Rey River from two higher watersheds, as well as from Agua Tibia creek. About one-third of the projected debris flow area lies outside the ten year flood plain.
- Relatively little of the debris flow affecting this area comes from within the watershed.
- This watershed includes Pala and Pauma-Yuima tribal lands.

Analysis

- Over 167 buildings are at risk from potential debris flows within this watershed.

- Of these, only four appear to be in non-tribal land. The remaining 163 appear to be within the Pala tribal lands. None of the affected buildings are within the Pauma-Yuima tribal lands in this watershed.

Potential Emergency Protective Measures

- Potential emergency protective measures should be examined to help reduce the risk of destructive debris flows, including installation of runoff barriers, placement of sandbags, dikes, ditching, jute netting, and fiber wattles. In addition, catchment basins may be useful on Agua Tibia Creek. This work could be eligible for funding under FEMA/OES PA Category A and B. Funding from NRCS could be used to accomplish the emergency protective measures. Funding may be available from the U.S. Army Corps of Engineers to create the catchment basins. Hydroseeding is not considered an option due to the potential for introduction of invasive species.

Temecula Creek/Arroyo Seco Creek

Background

- This watershed has only a small section within the Poomacha Fire burn area at its southernmost point.

Analysis

- There are no projected debris flows for this watershed.

Potential Emergency Protective Measures

- There are no protective measures considered for this watershed. All burned areas lie at the upper reaches of otherwise well-vegetated canyons, and any possible debris flows would be intercepted by the lower vegetation.

Temecula Creek/Long Canyon

Background

- This watershed had only a small section within the Poomacha Fire burn area at its westernmost point.

Analysis

- There are no projected debris flows for this watershed.

Potential Emergency Protective Measures

There are no protective measures considered for this watershed. All burned areas lie at the upper reaches of otherwise well-vegetated canyons, and any possible debris flows would be intercepted by the lower vegetation.

West Fork San Luis Rey River

Background

- This watershed had only a small section within the Poomacha Fire burn area at its westernmost point.

Analysis

- There are no projected debris flows for this watershed.

Potential Emergency Protective Measures

- There are no protective measures considered for this watershed. All burned areas lie at the upper reaches of otherwise well-vegetated canyons, and any possible debris flows would be intercepted by the lower vegetation.

Temescal Creek

Background

- This watershed involves both the Poomacha and the Witch Fire burn areas. The Poomacha Fire burn area involves the northernmost reach of this watershed.

Analysis

- No debris flows are projected within this watershed. However, any debris that would erode off the denuded soil would contribute to the debris flows feeding the flows from the Witch Fire in Temescal Creek, and thus aggravate the debris flow problem into the San Pasqual Valley. Therefore, preventive actions to reduce erosion are urged.

Potential Emergency Protective Measures

- Potential emergency protective measures should be examined to help reduce the risk of destructive debris flows, including installation of runoff barriers, placement of sandbags, dikes, ditching, jute netting, and fiber wattles. This work could be eligible for funding under FEMA/OES PA Category A and B. Funding from NRCS could be used to accomplish the potential emergency protective measures. Hydroseeding is not considered an option due to the potential for introduction of invasive species.

Santa Ysabel Creek/Rockwood Canyon

Background

- Very little of this watershed lies within the Poomacha Fire burn area, but the projected debris flows, which appear to run down Hell Creek, are shown to proceed south into this watershed, and outside of any ten year flood plain.

Analysis

- It appears that there are eight buildings within this debris flow in a small valley.

Potential Emergency Protective Measures

- Potential emergency protective measures should be examined to help reduce the risk of destructive debris flows including installation of runoff barriers, placement of sandbags, dikes, ditching, jute netting, and fiber wattles on the upper slopes above the valley. This work could be eligible for funding under FEMA/OES PA Category B, or under NRCS. Hydroseeding is not considered an option due to the potential for introduction of invasive species.

Table 1 – Possible Funding Sources

Yes	No	Funding Sources
X		FEMA/OES Public Assistance Emergency Work (Cat A & B)
	X	FEMA/OES Public Assistance Permanent Work (Cat C-G)
	X	406 Hazard Mitigation
	X	404 Hazard Mitigation
X		Natural Resource Conservation Service (NRCS)
	X	U.S. Fish & Wildlife Service
X		U.S. Army Corps of Engineers
	X	National Marine Fisheries Service (NMFS)
X		California Disaster Assistance Act
X		Federal Highways Administration (FHWA)
	X	Other Funding-DOI-Bureau of Indian Affairs

Appendices

Appendix A - Environmental Permitting Requirements
Appendix B - Archaeological
Appendix C - Descriptions of State and Federal Program Funding
Appendix D - Biological
Appendix E - Preliminary Suggested Projects

Total Pop.
12,471

Poomacha Post-Fire Hazard Awareness Map

FEMA DR-1731-CA

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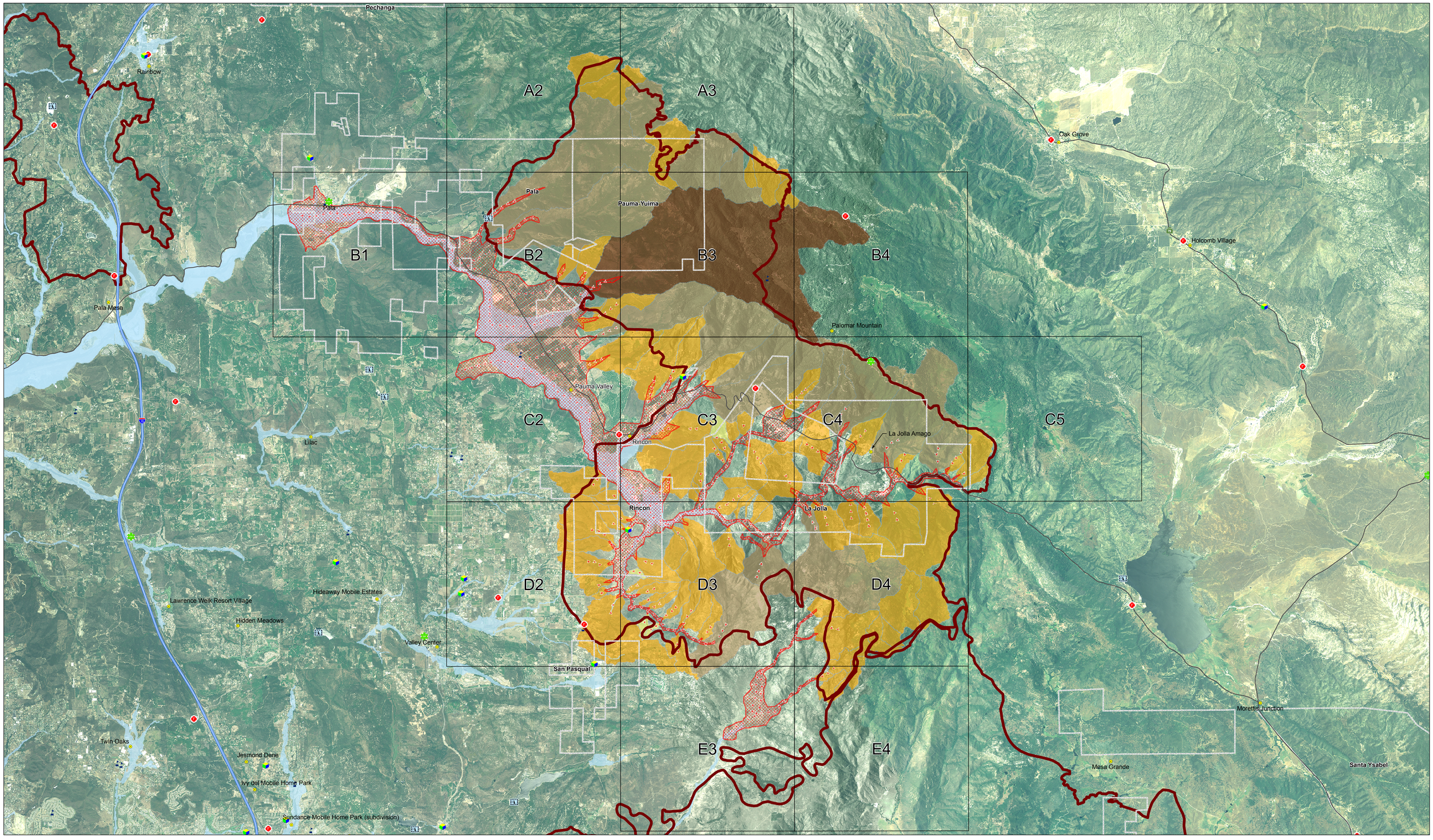


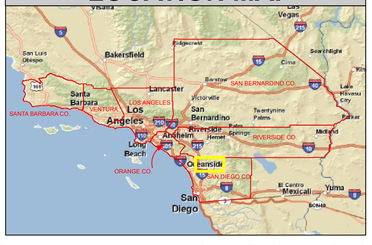
LEGEND

- Populated Places
- Daycare Facilities
- EMS
- Schools
- Fire Station
- Dam
- Poomacha Debris Flow Lines
- Tribal Lands
- FEMA Flood Hazard Areas
- Fire Perimeters
- FEMA Potential Debris Flow Areas

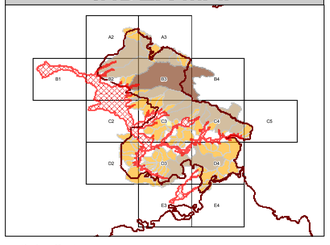
USGS Potential Debris Volume

- 0 to 1,000 cubic meters
- 1,001 to 10,000 cubic meters
- 10,001 to 100,000 cubic meters
- >100,000 cubic meters

LOCATION MAP



INDEX MAP



Department of Homeland Security
Federal Emergency Management Agency
Date Created: 11/29/07
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Version: V 1.0

N W E S

0 0.5 1 2 3 4 5 Kilometers

0 0.5 1 2 3 4 5 Miles

MAPS FOR ADVISORY PURPOSES ONLY. NOT FOR INSURANCE RATING PURPOSES. For insurance rating purposes, please refer to the Flood Insurance Rate Map currently in effect.
Debris flow information is PRELIMINARY. Debris flow volumes calculated in response to a 10 year recurrence based on 3 hour duration storm producing 2.25 inches of rainfall.
Volumes based on a model currently being tested. Debris flow behavior is highly unpredictable and this map shows the best available information at the time of printing.
Populations estimated using 2000 Census data and are calculated for those areas only within the grid index. 2000 Census data does not include Tribal Populations.

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